ADDENDUM NO. 1
March 27, 2023

PROJECT: ITD Project No. FM32301
New Meadows Maintenance Building Renovation
New Meadows, Idaho

The following addenda apply to the Drawings and/or Specifications for this project and shall be a part of the Contract Documents.

PROJECT MANUAL

SPECIFICATION SECTION 033543 – POLISHED CONCRETE FINISHING

1. Add Specification Section 033543 – Polished Concrete Finishing in its entirety.

SPECIFICATION SECTION 083613 – SECTIONAL DOORS

1. Add Specification Section 083613 – Sectional Doors in its entirety.

DRAWINGS

SHEET A2.1

1. Contractor is to remove and replace existing asphalt along entire length of the building approximately 15'-0" from the south elevation.

SHEET A4.1

1. At Rooms 100, 102, 103, 104, 105, floor finish is to be polished and stained concrete. At Rooms 106, 107, 108, floor finished is to be sealed concrete.
2. Provide blinds at Rooms 103 and 105. Blinds are to be horizontal louver blinds with aluminum slats.
    a. Product: Hunter Douglas
    b. Slats: Width, 1 inch.
    c. Finish: Ionized Coating, antistatic, dust repellent, baked polyester finish.

SHEET A8.1

1. At detail 1/A8.1, provide R-13 batt insulation, glass fiber, faced, at all wall cavities.
2. At detail 2/A8.1, provide R-13 batt insulation, glass fiber, faced, at all wall cavities.
3. At detail 3/A8.1, revise gypsum board to be gypsum sheathing. Provide gypsum sheathing, air barrier, hat channel and metal wall panel both sides of stud.
4. At detail 4/A8.1, provide R-13 batt insulation, glass fiber, faced at all wall cavities.

SHEET S2.0

At alternate No. 1, Contractor to provide an allowance for approximately 30'-0" s.f. of block replacement per detail 2/S3.0, additional areas may only require removal and replacement of mortar.

APPROVALS

The following approvals are for manufacturers of products only unless specified products or systems are indicated. Contractor is responsible for providing product and/or materials that are equivalent in size, performance, quality, and appearance to those specified. Contractor is responsible for all conditions and/or field adaptations required for approved products other than those specified.

This acceptance is an acceptance of quality only. No attempt has been made to check each material as to special features, capacities or physical dimensions especially required by this project. Final acceptance of exact features, sizes, capacities, etc. all of which must match materials indicated specified, will be determined when submitted during construction period. Certain acceptances are subject to conditions as noted.

SPECIFICATION SECTION NO.	ITEM	MANUFACTURER
265100 – Interior Lighting	Lighting	Elite Lighting / LuxLogic Lighting
265600 – Exterior Lighting	Lighting	CGF Design Inc.

Attachments:

Specification Section 033543 – Polished Concrete Finishing
Specification Section 083613 – Sectional Doors

- End of Addendum No. 1 -

SECTION 033543 - POLISHED CONCRETE FINISHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes polished concrete finishing, including scoring.

1. Concrete for polished concrete, including formwork, reinforcement, concrete materials, mixture design, color pigments, placement procedures, initial finishing, and curing is specified in Section 033000 "Cast-in-Place Concrete."

1.3 DEFINITIONS

A. Design Reference Sample: Sample designated by Architect in the Contract Documents that reflects acceptable surface quality and appearance of polished concrete.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with polished concrete to attend, including the following:

a. Contractor's superintendent.
b. Independent testing agency responsible for concrete design mixtures.
c. Ready-mix concrete manufacturer.
d. Cast-in-place concrete subcontractor.
e. Polished concrete finishing Subcontractor.
f. All subcontractor that will be working directly over or on the slabs.

2. Review cold- and hot-weather concreting procedures, curing procedures, construction joints, concrete repair procedures, concrete finishing, and protection of polished concrete.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Polishing Schedule: Submit plan showing polished concrete surfaces and schedule of polishing operations for each area of polished concrete before start of polishing operations. Include locations of all joints, including construction joints.

C. Samples for Initial Selection: For each type of product requiring color selection.

D. Samples for Verification: For each type of exposed color.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and manufacturer:

1. Use an experienced installer, and adequate skilled workmen, who are thoroughly trained and experienced in the necessary craft of concrete installation and diamond polishing.
2. Installer and skilled workmen must have a minimum of five-years' experience, with the specified requirements and methods for proper performance of the work.
3. Installer shall be approved by the manufacturer for installation and finish of all products.
4. Provide a letter of certification from the concrete finish manufacturer, stating that installer is certified applicator of special concrete finishes, and is familiar with proper procedures and installation requirements required by the manufacturer.

B. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Steel reinforcement and accessories.
4. Curing compounds.
5. Floor and slab treatments.
6. Liquid floor treatments.
7. Stain materials.
8. Vapor retarders.
9. Repair materials.

C. Material Test Reports: For the following, from a qualified testing agency:

1. Aggregates: Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.

D. Floor surface flatness and levelness measurements indicating compliance with specified tolerances:

1. Finish surfaces to the following tolerances, according to ASTM E 1155 (ASTM E 1155M), for a randomly trafficked floor surface:

a. Specified overall values of flatness, F(F) 45; and of levelness, F(L) 35; with minimum local values of flatness, F(F) 30; and of levelness, F(L) 24.

E. Field quality-control reports.

F. Minutes of preinstallation conference.

1.7 QUALITY ASSURANCE

A. Field Sample Slab/Mockup: After approval of verification sample and before placing concrete, produce field sample slabs/mockups to demonstrate the approved range of selections made under Action submittals. Produce a minimum of three sets of full-scale slabs, approximately 96 by 96 inches (2400 by 2400 mm) minimum, to demonstrate the expected range of finish, tolerances, typical joints, color, appearance variations, and standards of workmanship.

1. Locate slabs as indicated or, if not indicated, as directed by Architect.
2. Maintain field sample slabs during construction in an undisturbed condition as a standard for judging the completed Work.
3. Include entire system, including depth of grind, color pigments, all chemicals and surface treatments.
4. Demonstrate curing, finishing, and protecting of polished concrete.
5. Obtain from the Architect and Owner approval of the field sample slabs/mockup before starting commencement of any slabs to be polished.
6. If Architect and Owner determine that the field sample slabs/mockup do not meet the requirements, General Contractor will demolish and remove them from the site, at no cost to the Owner, and place new field sample slabs/mockups until approved.
7. Demolish and remove field sample slabs when directed.

B. No satisfactory chemical or cleaning procedure is available to remove petroleum and other stains from concrete surfaces, so prevention and protection of concrete is required until occupancy.
1. No pipe cutting machine will be allowed on the slabs.
2. No steel or other staining materials will be allowed to be placed on the slabs.
3. No acids or acidic detergents shall be allowed on the slabs.
4. Protection board (minimum 1/2-inch plywood), over underlayment, must be placed over the slab, after troweling efforts have been completed. Boards must be continuously applied over all slabs, with no gaps over 1/8-inch, and not be removed until grinding efforts are to commence. Underlayment shall be placed under the boards, as approved by manufacturer, to avoid small particles from scratching, chipping, gouging, and general damage of the surface. Plywood to be seamed at corners with flat electrical plates and fasteners, or device as otherwise approved by Architect. Fasteners are to protect floor, stop plywood from moving, and provide even surface for work to commence over slabs.
5. All trades must be informed of the protection effort, aid in the protection of the slab always, and attend the concrete pre-construction meeting on polished concrete finishing.
6. Lifts, and other equipment used throughout construction, may be driven over the protection board, but not until the concrete has been cured a minimum of fourteen (14) days, and has enough compression strength to support the equipment without damage to the slab.

C. Deliver materials in original containers, with seals unbroken, bearing manufacturer’s labels indicating brand name and directions for storage.

D. Dispense special concrete finish material from factory numbered and sealed containers. Maintain record of container numbers.

E. Comply with manufacturer’s written instructions for substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting topping performance.

1. Concrete Floor Flatness values of flatness, F(F) 45; and of levelness, F(L) 35; with minimum local values of flatness, F(F) 30; and of levelness, F(L) 24.
2. Concrete must be cured a minimum of 45 days or as directed by the manufacturer before any applications of finishes begins.
3. Final application shall take place 10 days prior to installation of equipment and substantial completion, thus providing a complete uninhibited concrete slab.

4. Close areas to during floor application processes, from any traffic, for a time period recommended in writing by the manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Ensure manufacturer has minimum 5 years experience in manufacturing components similar to or exceeding requirements of project.

2.2 Polished Concrete Finishing Products

A. Basis of Design Manufacturer: L & M Construction Chemicals, Inc. “Permashine” system.

1. Contact: 14851 Calhoun Rd., Omaha, NE 68152-1140; Telephone: (800) 362-3331, (402) 453-6600; Fax: (402) 453-0244; E-mail: info@lmcc.com; website: www.lmcc.com, www.fgs-permashine.com.

2. Products approved subject to compliance with “Basis of Design” product:

a. Retroplate; RetroPel

b. PROSOCO Inc. “Consolideck”

B. Proprietary Products/Systems:

1. Hardener, Sealer, Densifier: Proprietary, clear, water based, odorless liquid, VOC compliant, environmentally safe chemical hardening solution leaving no surface film; that penetrates, seals, and is suitable for polished concrete surfaces.

a. Acceptable Material: L & M Construction Chemicals, Inc., FGS Hardener Plus or comparable product by one of the approved manufacturers above.

2. Joint Filler: Semi-rigid, 2-component, self-leveling, 100% solids, rapid curing, polyurea control joint and crack filler with Shore A 80 or higher hardness.

a. Acceptable Material: L & M Construction Chemicals, Inc., Joint Tite 750 or or comparable product by one of the approved manufacturers above.

b. Joint filler to be installed in all cut control joints and construction joints.

3. Oil Repellent Sealer: Ready to use, silane, siloxane and fluoropolymers blended water based solution sealer, quick drying, low-odor, oil and water repellent, VOC compliant and compatible with chemically hardened floors.

a. Acceptable Material: L & M Construction Chemicals, Inc., Petrotex or comparable product by one of the approved manufacturers above.

4. Concrete Dyes: Fast-drying dye, packaged in premeasured units ready for mixing with VOC exempt solvent; formulated for application to polished cementitious surfaces.

a. Acceptable Material: L & M Construction Chemicals, Inc., Vivid Concrete Dyes or comparable product by one of the approved manufacturers above.

5. Cleaning Solution: Proprietary, mild, highly concentrated liquid concrete cleaner and conditioner containing wetting and emulsifying agents; biodegradable, environmentally safe and certified High Traction by National Floor Safety Institute (NFSI).

a. Acceptable Material: L & M Construction Chemicals, Inc., FGS Concrete Conditioner or comparable product by one of the approved manufacturers above.

6. Polish: Standard Medium gloss, 800 grit at all locations. All grinding will initially start with 60 grit to provide a finer finished product. All floor to wall edges shall be completed with hand held equipment to ensure a finished edge at the slab to wall intersection.

7. Color: As selected by Architect.

PART 3 - EXECUTION

3.1 PROTECTION AND POLISHING

A. Polish: Medium Gloss, 800 grit at all locations. See drawings for locations and specific requirements of this Specification. All grinding will initially start with 60 grit to provide a finer finished product.

B. Apply polished concrete finish system to cured and prepared slabs to match accepted field sample panels/mockup.

1. Machine grind floor surfaces to receive polished finishes level and smooth.
2. Grind floor in accordance with manufacturer's written instructions.
3. Continue polishing with progressively finer-grit diamond polishing pads to gloss level, to match approved mockup.
4. Apply reactive stain repellent for polished concrete in accordance to manufacturer's written instructions.
5. Apply reactive floor sealer for polished concrete in accordance to manufacturer's written instructions.
6. Control and dispose of waste products produced by grinding and polishing operations.
7. Neutralize and clean polished floor surfaces.

H. Apply FGS Hardener Plus, Hardener, Densifier as Follows:

a. First coat at 250 ft^2/gal (6.25 m^2/L).
b. Second coat at 350 ft^2/gal (8.75 m^2/L).
c. Follow manufacturer's recommendations for drying time between successive coats.

I. Remove defects and repolish defective areas.

J. Finish edges of floor finish adjoining other materials in a clean and sharp manner.

K. Provide 1/8 inch wide x 1 inch deep control joints at all color transitions.

L. Install joint filler at all saw control joints, expansion, and construction joints.

3.2 WORKMANSHIP AND CLEANING

A. At all times, keep the slabs clean from any debris.

B. Do not allow debris, associated with grinding and polishing the slab, from damaging adjoin surfaces.

C. Keep slabs protected at all time from damage, prior, during, and after finishing.

D. Protect slabs once finishing has been completed until final completion of the project.

END OF SECTION 033543

SECTION 083613 - SECTIONAL DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes electrically operated sectional doors.

B. Related Requirements:

1. Section 055000 "Metal Fabrications" for miscellaneous steel supports.

1.3 ACTION SUBMITTALS

A. Product Data: For each type and size of sectional door and accessory.

1. Include construction details, material descriptions, dimensions of individual components, profile door sections, and finishes.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished accessories.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data.

1. Include plans, elevations, sections, and mounting details.
2. Include details of equipment assemblies. Indicate dimensions, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include points of attachment and their corresponding static and dynamic loads imposed on structure.
4. Include diagrams for power, signal, and control wiring.

C. Samples for Initial Selection: For units with factory-applied finishes.

1. Include Samples of accessories involving color selection.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sectional doors to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer for both installation and maintenance of units required for this Project.

1.6 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures including, but not limited to, excessive deflection.
b. Failure of components or operators before reaching required number of operation cycles.
c. Faulty operation of hardware.
d. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use; rust through.
e. Delamination of exterior or interior facing materials.

2. Warranty Period: **One year for hardware and Ten Years for structural failure, rust, and delamination** from date of Substantial Completion.

B. Special Finish Warranty: Manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Warranty Period: **One year** from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS, GENERAL

A. Source Limitations: Obtain sectional doors from single source from single manufacturer.

1. Obtain operators and controls from sectional door manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. General Performance: Sectional doors shall comply with performance requirements specified without failure due to defective manufacture, fabrication, installation, or other defects in construction.

2.3 STEEL DOOR ASSEMBLY - Insulated

A. Steel Sectional Door: Insulated sectional door formed with hinged sections.

1. Full view and solid panel sections as indicated on Drawings.

    a. Basis of Design: Haas Commercial 700 Series, electrically operated, Model 733.
    b. Overhead Door 596 is also approved with standard 20 gauge exterior and 26 gauge interior faces.

B. Doors by other manufacturers are subject to approval by Architect prior to bidding.

C. R-Value: 16.0 deg F x h x sq. ft./BTU minimum.

D. Steel Sections: Zinc-coated (galvanized) steel sheet with G90 (Z275) zinc coating.

1. Section Thickness: 1 3/4 inches.
2. Exterior-Face, Steel Sheet Thickness: 20 ga.

    a. Surface: V-groove smooth steel.

3. Insulation: CFC – free polyurethane, 1 3/4 inch.
4. Interior Facing Material: Steel sheet thickness: 26 ga. V-groove woodgrain steel.
5. **Windows: 1/2 inch insulating units consisting of 1/8 inch solar gray tempered glass and 1/8 inch clear glass.**

E. Track Configuration: Standard-lift track, horizontal door storage.
F. Weatherseals: Fitted to bottom and top and around entire perimeter of door.

G. Roller-Tire Material: Manufacturer's standard.

H. Locking Devices: Equip door with slide bolt locking devices.

I. Counterbalance Type: Torsion spring.

J. Electric Door Operator:

1. Usage Classification: Heavy duty, 25 or more cycles per hour and more than 90 cycles per day.
2. Operatory Type: Manufacturer's standard for door requirements.
3. Safety: Listed according to UL 325 by a qualified testing agency for commercial or industrial use.
4. Motor Exposure: Interior, clean, and dry.
5. Emergency Manual Operation: Chain
6. Obstruction-Detection Device: Automatic photoelectric sensor.

K. Door Finish:

1. Baked-Enamel Exterior Sections Finish: Color and gloss as selected by Architect from manufacturer's standard colors.
2. Finish of Interior Facing Material: White.
3. Color of aluminum full view window sash sections shall be painted or powder coated to match door face panel color.

2.4 MATERIALS, GENERAL

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.5 STEEL DOOR SECTIONS

A. Exterior Section Faces and Frames: Fabricate from zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet, complying with ASTM A 653/A 653M, with indicated zinc coating and thickness.

1. Fabricate section faces from single sheets to provide sections not more than 24 inches (610 mm) high and of indicated thickness. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
2. For insulated doors, provide sections with continuous thermal-break construction, separating the exterior and interior faces of door.

B. Section Ends and Intermediate Stiles: Enclose open ends of sections with channel end stiles formed from galvanized-steel sheet not less than 0.064-inch- (1.63-mm-) nominal coated thickness and welded to door section. Provide intermediate stiles formed from not less than 0.064-inch- (1.63-mm-) thick galvanized-steel sheet, cut to door section profile, and welded in place. Space stiles not more than 48 inches (1219 mm) apart.

C. Reinforce bottom section with a continuous channel or angle conforming to bottom-section profile.

D. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized-steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place.

E. Provide reinforcement for hardware attachment.

F. Board Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard polyurethane board insulation, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84; or with glass-fiber-board insulation. Secure insulation to exterior face sheet. Enclose insulation completely within steel sections that incorporate the following interior facing material, with no exposed insulation:

1. Interior Facing Material: Zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet, complying with ASTM A 653/A 653M.

G. Fabricate sections so finished door assembly is rigid and aligned, with tight hairline joints and free of warp, twist, and deformation.

2.6 TRACKS, SUPPORTS, AND ACCESSORIES

A. Tracks: Manufacturer's standard, galvanized-steel track system of configuration indicated, sized for door size and weight, designed for lift type indicated and clearances indicated on Drawings,

provide complete system including brackets, bracing, and reinforcement to ensure rigid support of ball-bearing roller guides for required door type, size, weight, and loading.

1. Galvanized Steel: ASTM A 653/A 653M, minimum G60 (Z180) zinc coating.
2. Slope tracks at an angle from vertical or design tracks to ensure tight closure at jambs when door unit is closed.
3. Track Reinforcement and Supports: Galvanized-steel members to support track without sag, sway, and vibration during opening and closing of doors. Slot vertical sections of track spaced 2 inches (51 mm) apart for door-drop safety device.

    a. For Vertical Track: Continuous reinforcing angle attached to track and attached to wall with jamb brackets.

    b. For Horizontal Track: Continuous reinforcing angle from curve in track to end of track, attached to track and supported at points by laterally braced attachments to overhead structural members.

B. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of sectional door unless otherwise indicated.

C. Windows: Manufacturer's standard window units of type, size, and in arrangement indicated. Set glazing in vinyl, rubber, or neoprene glazing channel for metal-framed doors and elastic glazing compound for wood doors, as required. Provide removable stops of same material as door-section frames.

2.7 HARDWARE

A. General: Heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.

B. Hinges: Heavy-duty, galvanized-steel hinges of not less than 0.079-inch- (2.01-mm-) nominal coated thickness at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is impossible. Provide double-end hinges where required, for doors more than 16 feet (4.88 m) wide unless otherwise recommended by door manufacturer.

C. Rollers: Heavy-duty rollers with steel ball-bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Provide 3-inch- (76-mm-) diameter roller tires for 3-inch- (76-mm-) wide track and 2-inch- (51-mm-) diameter roller tires for 2-inch- (51-mm-) wide track.

2.8 LOCKING DEVICES

A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.

B. Locking Device Assembly: Fabricate with cylinder lock, spring-loaded deadbolt, operating handle, cam plate, and adjustable locking bars to engage through slots in tracks.

1. Lock Cylinders: Cylinders standard with manufacturer and keyed to building keying system.
2. Keys: Three for each cylinder.

C. Chain Lock Keeper: Suitable for padlock at exterior doors.

D. Safety Interlock Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

2.9 COUNTERBALANCE MECHANISM

A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs fabricated from steel-spring wire complying with ASTM A 229/A 229M, mounted on torsion shaft made of steel tube or solid steel. Provide springs designed for number of operation cycles indicated.

B. Cables: Galvanized-steel, multistrand, lifting cables with cable safety factor of at least 5 to 1.

C. Cable Safety Device: Include a spring-loaded steel or spring-loaded bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if either lifting cable breaks.

D. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.

E. Bumper: Provide spring bumper at each horizontal track to cushion door at end of opening operation.

2.10 ELECTRIC DOOR OPERATORS

A. General: Electric door operator assembly of size and capacity recommended and provided by door manufacturer for door and "operation cycles" requirement specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

1. Comply with NFPA 70.
2. Control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6; with NFPA 70, Class 2 control circuit, maximum 24-V ac or dc.

B. Usage Classification: Electric operator and components capable of operating for not less than number of cycles per hour indicated for each door.

C. Door-Operator Type: Unit consisting of electric motor, gears, pulleys, belts, sprockets, chains, and controls needed to operate door and meet required usage classification.

D. Motors: Reversible-type motor with controller for motor exposure indicated.

1. Electrical Characteristics:

    a. Phase: Single phase.
    b. Volts: 208 V.

2. Motor Size: Minimum size as indicated. If not indicated, large enough to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. (203 mm/s) and not more than 12 in./sec. (305 mm/s), without exceeding nameplate ratings or service factor.
3. Operating Controls, Controllers (Disconnect Switches), Wiring Devices, and Wiring: Manufacturer's standard unless otherwise indicated.
4. Coordinate wiring requirements and electrical characteristics of motors and other electrical devices with building electrical system and each location where installed.
5. Use adjustable motor-mounting bases for belt-driven operators.

E. Limit Switches: Equip motorized door with adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.

F. Obstruction Detection Device: External entrapment protection consisting of indicated automatic safety sensor capable of protecting full width of door opening. Activation of device immediately stops and reverses downward door travel.

1. Photoelectric Sensor: Manufacturer's standard system designed to detect an obstruction in door opening without contact between door and obstruction.

    a. Self-Monitoring Type: Designed to interface with door operator control circuit to detect damage to or disconnection of sensing device. When self-monitoring feature is activated, door closes only with sustained pressure on close button.

G. Control Station: Three-button control station in fixed location with momentary-contact push-button controls labeled "Open" and "Stop" and sustained- or constant-pressure, push-button control labeled "Close."

1. Interior-Mounted Units: Full-guarded, surface-mounted, heavy-duty type, with general-purpose NEMA ICS 6, Type 1 enclosure.

H. Emergency Manual Operation: Equip electrically powered door with capability for emergency manual operation. Design manual mechanism so required force for door operation does not exceed 25 lbf (111 N).

I. Emergency Operation Disconnect Device: Equip operator with hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.

J. Motor Removal: Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.

2.11 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM/NOMMA's "Metal Finishes Manual for Architectural and Metal Products (AMP 500-06)" for recommendations for applying and designating finishes.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.12 FINISHES

A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

B. Baked-Enamel or Powder-Coat Finish: AAMA 2603. Comply with coating manufacturer's written instructions for cleaning, conversion coating, application, and baking.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrate construction and other conditions affecting performance of the Work.

B. Examine locations of electrical connections.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

B. Tracks:

1. Fasten vertical track assembly to opening jambs and framing, spaced not more than 24 inches (610 mm) apart.
2. Hang horizontal track assembly from structural overhead framing with angles or channel hangers attached to framing by welding or bolting, or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

C. Accessibility: Install sectional doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.

D. Power-Operated Doors: Install automatic garage doors openers according to UL 325.

3.3 STARTUP SERVICES

A. Engage a factory-authorized service representative to perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.
2. Test and adjust controls and safety devices. Replace damaged and malfunctioning controls and equipment.

3.4 ADJUSTING

A. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion.

B. Lubricate bearings and sliding parts as recommended by manufacturer.

C. Adjust doors and seals to provide weather-resistant fit around entire perimeter.

D. Touch-up Painting: Immediately after welding galvanized materials, clean welds and abraded galvanized surfaces and repair galvanizing to comply with ASTM A 780/A 780M.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional doors.

END OF SECTION 083613